

Notice of Allowability

Application No.

09/901,566

Examiner

Carlos Lugo

Applicant(s)

ITO ET AL.

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed on August 26, 2005.
2. ☒ The allowed claim(s) is/are 1 and 3-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This Office Action is in response to applicant's RCE filed on August 26, 2005.

Allowable Subject Matter

2. **Claims 1 and 3-10 are allowed.**

Reasons For Allowance

3. The following is an examiner's statement of reasons for allowance:

Claims 1 and 5 are allowable over the prior art of record because the teachings of the references taken as a whole do not teach or render obvious the combination set forth, including that the gasket, having a sheet form, provide a seal between the flat lower end face of a cylinder block and the cooperating end surfaces on the first and second halves of the crankcase and to come in close contact with the upper end faces of the enlarged end portions of the bar shaped seal member.

Obermayer (DE 3,841,203) discloses a seal structure comprising a crankcase (1) having a crank chamber. The crankcase is coupled to a lower flat face of a cylindrical block (4). The crankcase includes first and second case half (1' and 1'') coupled to each other in a plane perpendicular to the joint surfaces between the crankcase and the cylindrical block. One of the case half includes a U shaped groove (5) that extends along a peripheral edge of the chamber (Page 2 Lines 5-9, where at least one member includes the groove). Enlarged recesses (16, where 12 is located) are provided in the first and second case halves and extend laterally from opposite ends of the seal groove.

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A bar shaped seal member (6) is mounted in the groove. A gasket (10) is located between the joint surfaces of the block and the crankcase that comes in close contact with the end portions of the bar seal member. A T-shaped intersecting joint are among the cylindrical head and the first and second case halves is sealed by the seal member and the gasket.

Obermayer fails to disclose that the opposing ends of the bar shaped seal have an enlarged end to be entirely filled on the enlarged recess.

Prior (US 5,263,444) teaches that it is well known in the art of seals to have a seal structure (30) located on a groove between crankcases members (10 and 12) comprising a bar shaped seal member (32) having enlarged opposite ends (36) that is received on enlarged recess (28).

Also, Obermayer fails to disclose that the gasket has a sheet form. Obermayer discloses that the gasket has a doughnut shape.

Prior also teaches that it is well known in the art to have a gasket (24) in contact with the enlarged end of the seal member.

Further, Obermayer fails to disclose that the enlarged recess is located in only one of the crankcases halves. Obermayer disclose that a seal ring (10) that is attached to the opposite ends of the bar seal member and placed on the enlarged recess (with the help of the spring member 15). Also, Obermayer discloses that both halves (1 and 1') have the enlarged recess (16, Page 3 Lines 21-23 of the translation).

Ottenschläger (US 5,934,686) teaches that it is well known in the art to have surfaces (1 and 11) attached together, wherein only one surface (as seen in Figure 1) has a U-shaped groove (7) with an enlarged recess (8). That U-shaped groove will receive a U shaped seal (5) and the enlarged recess (8) will receive an enlarged end (4).

However, Obermayer, as modified by Prior and Ottenschläger, fails to disclose that the gasket, having a sheet form, provide a seal between the flat lower end face of a cylinder block and the cooperating end surfaces on the first and second halves of the crankcase and to come in close contact with the upper end faces of the enlarged end portions of the bar shaped seal member.

Prior discloses the use of a gasket (24) in sealing engagement with the enlarged portion of the bar shaped seal member. However, this gasket is used to seal between a lateral surface (18) and a crankshaft.

Ottenschläger teaches that the seal (2) has an U-shaped part (5) and a straight part (3), wherein the straight part creates a seal between the upper part (11) and the lower part wherein the seal is located (1). However, first, Ottenschläger fails to disclose that the parts to be sealed are a crankcase and a cylinder block, and second, this straight part is not sealing contact with the enlarged portions (4) of the U-shaped part.

Akbar (US 5,222,745), previously cited prior art, teaches a gasket of sheet form between to bodies. However, Akbar fails to disclose that the parts to be sealed are a crankcase and a cylinder block.

Further, even if Prior, Ottenschläger, or Akbar, teach a gasket, having a sheet form, providing a seal between the flat lower end face of a cylinder block and the cooperating end surfaces on the first and second halves of the crankcase and to come in close contact with the upper end faces of the enlarged end portions of the bar shaped seal member, it would be obvious to provide this teaching into the device described by Obermayer, because the device described by Obermayer requires an insulating plate between the flat lower end face of a cylinder block and the cooperating end surfaces on the first and second halves of the crankcase. Therefore, there will be no seal between the flat lower end face of a cylinder block and the cooperating end surfaces on the first and second halves of the crankcase.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lugo whose telephone number 571-272-7058. The examiner can normally be reached on 9-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

C.L.

Carlos Lugo
AU 3676

October 19, 2005.

A handwritten signature in black ink, appearing to read "Brian E. Glessner", with a long horizontal flourish extending to the right.

BRIAN E. GLESSNER
SUPERVISORY PATENT EXAMINER